

4.13 VISUAL RESOURCES AND ODORS

4.13.1 Summary of Environmental Consequences

The proposed EES facilities would result in a significant visual contrast with the existing landscape setting of Salton Sea and its shoreline. Contrasts created by these facilities would attract attention and would be dominant features on the landscape. This impact would most affect views to Salton Sea as seen from SR 86, Salton City, and the former Salton Sea Test Base (for alternatives 3 and 4), and views from SR 111, the Dos Palmas Reserve, and the communities of Lark Spa and Fountain of Youth (for Alternative 2). The views of recreational boaters also would be affected by construction and operation of the EES facility on either side of the Sea. The proposed EES facilities would be inconsistent with the VRM Class II classification for the Salton Sea Basin, and proposed mitigation measures applied to the facility would not reduce this contrast to less than significant levels.

The proposed evaporation ponds under alternatives 1 and 4 similarly would result in a significant contrast with the basin's existing landscape setting. Contrasts would be most evident from viewing locations along the Sea's western shoreline, such as from Salton City, as well as from nearby recreationists, such as boaters.

Proposed project features would be visually dominant from Red Hill Marina on the south shore and be visible from within the Torres Martinez Indian Reservation. Common actions in chapter five, which include fish harvesting, improved recreational facilities, and shoreline cleanup will generally have positive visual impacts for the Salton Sea Basin.

4.13.2 Significance Criteria

Aesthetic resource impacts for the project are analyzed using the VRM Program developed by the BLM, as set forth in the BLM Manual, Sections 8440, H-8410-1, and H-8431-1 (US Department of the Interior, Bureau of Land Management 1978, 1986a, 1986b). The assessment of visual contrast is based on the long-term effects of the project as seen from key visual observation points (KVOP), where sensitivity levels are identified as high or where the project is particularly visible. Several variables are considered in establishing overall visibility levels: view orientation, lighting conditions, view distance, duration of view, viewer numbers, and use associations. Criteria used to rate the level of visual contrast created by the project include changes in the texture, color, line, and form of land and water areas, vegetative patterns and diversity, and existing structures as seen in foreground/middleground views.

Aesthetic impacts are quantified based on the BLM's visual contrast rating system. Out of a maximum possible contrast rating of 30, aesthetic impacts of proposed restoration actions are considered potentially significant if these actions result in a permanent contrast rating of the following:

- Over 20 for VRM Class IV areas;
- Over 16 for VRM Class III areas; or

- Over 12 for VRM Class II areas.

CEQA guidelines consider that a project would have a potentially significant impact if its implementation would result in any of the following:

- Substantially damage scenic resources;
- Substantially degrade the existing visual character or quality of a site and its surroundings; or
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

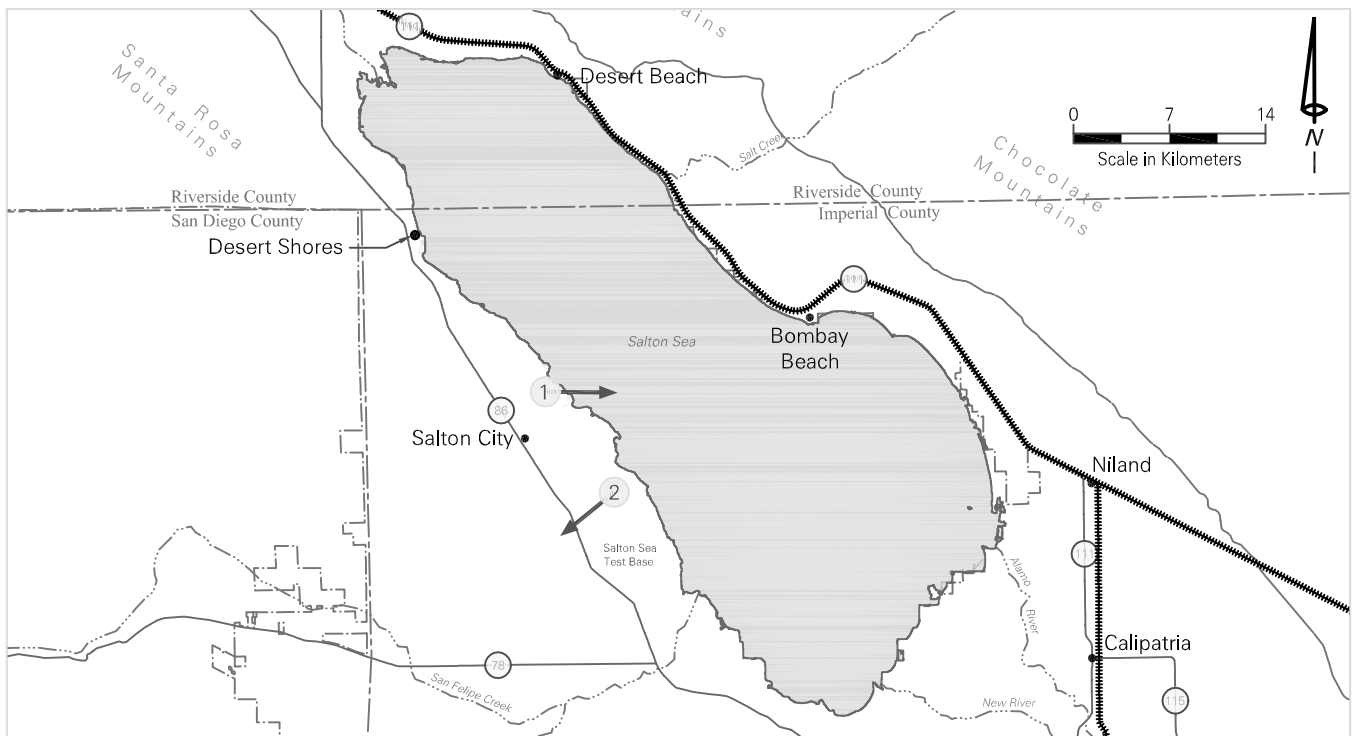
A significant impact also could occur if an alternative resulted in conditions that produced significant odors beyond those experienced under No Action Alternative conditions.

4.13.3 Assessment Methods

The objective of the aesthetic impact assessment is to establish whether new facilities will be compatible with the existing physical landscape setting and to identify landscape features that determine how noticeable such facilities would be. This analysis compares the visual characteristics of the existing landscape with those of proposed facilities and determines the resulting level of contrast. Although not part of the formal BLM contrast rating process, this aesthetic assessment also takes into consideration olfactory aspects of the restoration actions. The adverse aesthetic effect of new or increased odor sources are considered in the overall contrast rating process.

The degree to which the project alternatives affect the visual quality of a landscape depends on the visual contrast created between the project and the existing landscape. Potential aesthetic impacts have been evaluated using a contrast rating system. This assessment process provides a means for determining aesthetic impacts and for identifying measures to mitigate these impacts.

BLM objectives for visual resource management direct that the proposed project be evaluated from key points. Ten KVOPs where viewer sensitivity levels are high to moderate and that view all or part of the proposed restoration areas are used in this analysis. The KVOPs were chosen to be representative of views of the restoration areas from the surrounding region. Factors that were considered in selecting these KVOPs include angle of observation, number of viewers, length of time the project is in view, season of use, and light conditions. The location of each KVOP is shown on figures 4.13-1, 4.13-2, and 4.13-3; these figures include photographs illustrating existing views for seven of the nine KVOPs. Formal contrast ratings for long-term impacts were made from each of these KVOPs (see



1 View southeast from Salton City where northern concentration pond dike would extend and meet shoreline.



2 State Route 86, entrance to Salton Sea Test Base, location of road crossing for haul road. Looking West.

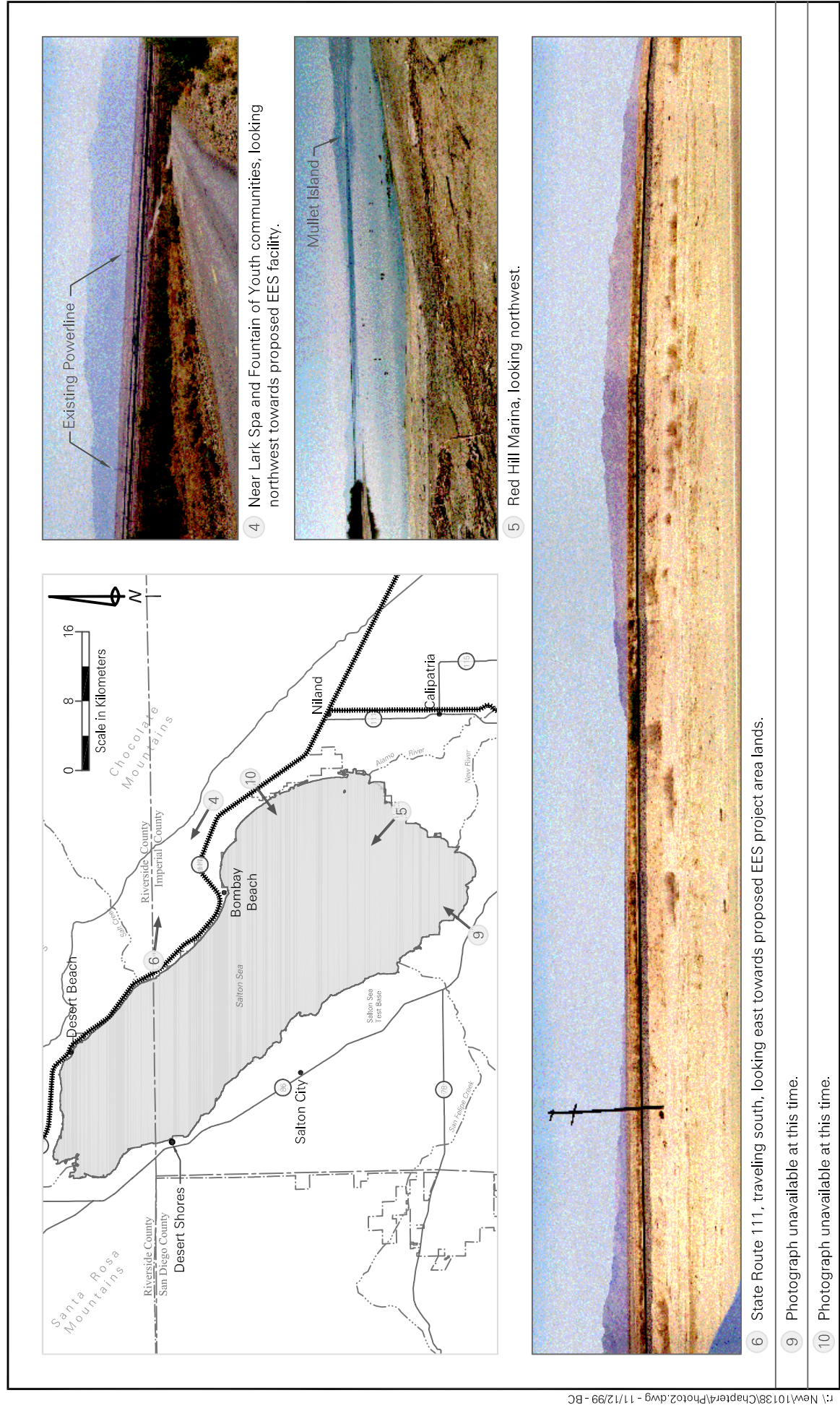
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- 1 → Key Viewer Observation Point and Direction of View

Salton Sea Area

Salton Sea, California

Figure 4.13-1

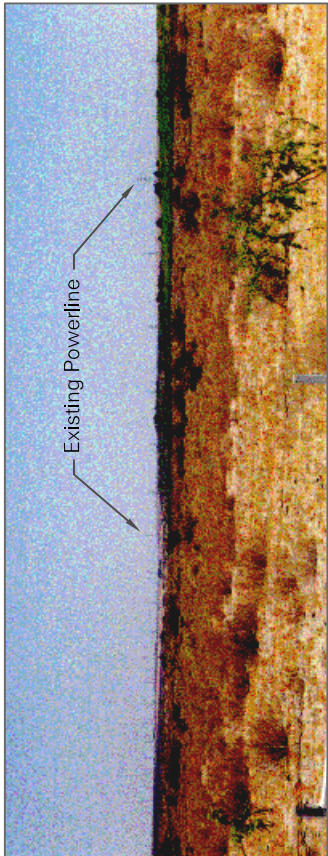


Salton Sea Area
Salton Sea, California

Figure 4.13-2

- Photo Unavailable at this Time -

7 Desert Shores community, looking southwest towards proposed haul road location.



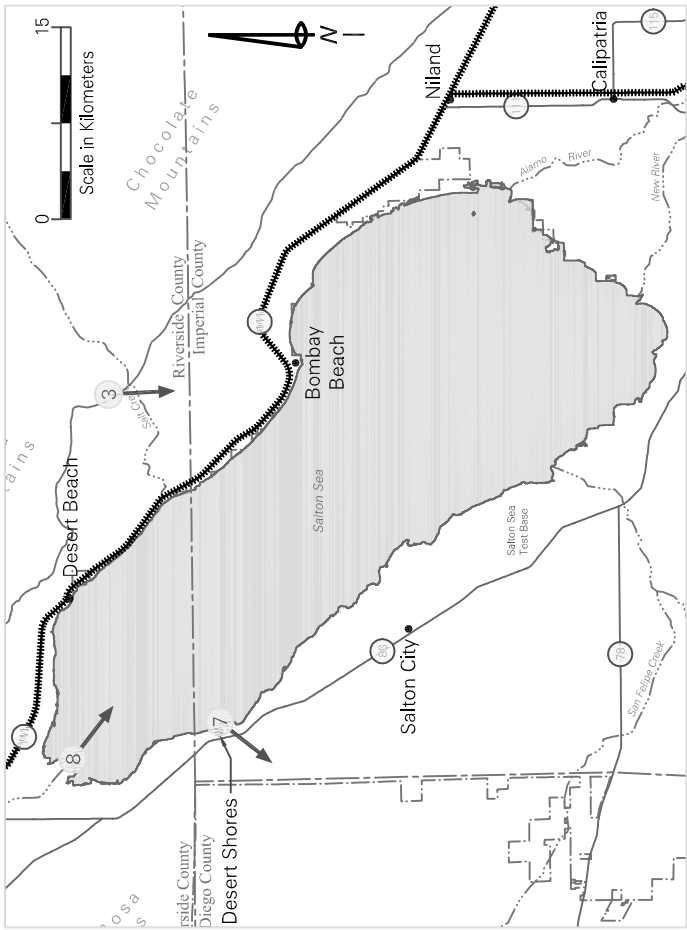
3 The Nature Conservancy, Dos Palmas Reserve, looking south towards proposed EES site.



8 Torres Martinez Reservation, looking southeast from shoreline.

Legend

1 Key Viewer Observation
Point and Direction of View



Salton Sea Area

Salton Sea, California

Figure 4.13-3

Appendix D). Table 4.13-1 summarizes the results of the contrast analysis relative to the significance criteria.

(Note to Reviewers: *The visual contrast analysis is based on interim, unofficial VRM classifications that are highly conservative and are assumed as part of the impact analysis. Tetra Tech is awaiting receipt of official BLM VRM classifications for the Salton Sea Basin from the El Centro BLM Office. Therefore, the conclusions presented in the impact analysis are preliminary and subject to change.*)

Table 4.13-1
VRM Significance Levels and Contrast Ratings

KVOP	Existing VRM Classification ¹	Contrast Rating/ Significance Threshold	Contrast Rating from KVOP ²	Distance Zone
Salton City	Class II	12	17	Foreground/middleground (concentration ponds, EES and former Salton Sea Test Facility)
SR 86- (near Salton Sea Test Base)	Class II	12	27	Foreground/middleground (concentration ponds and EES at former Salton Sea Test Base)
SR 86- (segment from Salton Sea Test Base to southern tip of Salton Sea)	Class II	12	7	Foreground/middleground (pupfish pond)
Dos Palmas Reserve	Class II	12	20	Foreground/middleground (EES at Bombay Beach)
Lark Spa and Fountain of Youth Communities	Class II	12	19	Foreground/middleground (EES at Bombay Beach)
Red Hill Marina	Class II	12	10	Seldom seen (EES at Bombay Beach); background (EES at former Salton Sea Test Facility/ concentration ponds)
SR 111	Class II	12	28	Foreground/middleground (EES at Bombay Beach)
SR 111 (segment closest to and between Bombay Beach and Mullet Island)	Class II	12	7	Foreground/middleground (southeast shorebird pond)
Desert Shores	Class II	12	9	Foreground/middleground (Haul Road)
Torres Martinez Indian Reservation	Class II	12	9	Background/seldom seen (EES and concentration pond facilities)

¹ VRM classifications are interim unofficial designations and are highly conservative, assumed as part of the impact analysis. Tetra Tech is awaiting the receipt of official BLM VRM classifications for the Salton Sea Basin. Therefore, the conclusions presented in the impact analysis are preliminary and are subject to change.

² See Appendix D.

The ten KVOPs are as follows:

- Salton City, looking east toward Salton Sea;
- SR 86, traveling both north and south, looking east;
- SR 86, traveling both north and south, segment from Salton Sea Test Base to southern tip of Salton Sea, looking northeast;
- Dos Palmas Reserve, looking south;
- The communities of Lark Spa and Fountain of Youth, looking northwest;
- Red Hill Marina, looking north and northwest;
- SR 111, traveling both north and south, looking east;
- SR 111, traveling both north and south; segment 5 miles south of Bombay Beach to Mullet Island; looking west;
- Desert Shores, looking west (toward proposed haul road); and
- Torres Martinez Indian Reservation, looking south/southeast.

Observer positions and routes of travel where viewer sensitivity levels are high to moderate and with potential views to the proposed evaporation ponds (alternatives 1 and 4) and EES facility at the Salton Sea Test Base (alternatives 3,4) include residences in Salton City and motorists traveling both north and south along SR 86.

Observer positions and routes of travel where viewer sensitivity levels are high to moderate and with potential views to the proposed EES facility near Bombay Beach (Alternative 2) include the following:

- Dos Palmas Reserve;
- The communities of Lark Spa and Fountain of Youth; and
- SR 111 traveling both north and south.

Observer positions and routes of travel where viewer sensitivity levels are high to moderate and with potential views to the proposed haul road adjacent and parallel to SR 86 (alternatives 1 and 4) include residences at Salton City and Desert Shores and motorists on SR 86, traveling both north and south.

The contrast ratings for each project element at the KVOPs have been compared with the objectives for the VRM class. For comparison, the four levels of contrast (none, weak, moderate, and strong) roughly correspond with classes I, II, III, and IV, respectively. This means that a strong contrast rating may be acceptable in a Class IV area but probably would not meet the VRM objectives for a Class III area. If the contrast rating scores meet the requirement for the VRM class, the visual impact is considered insignificant. If the contrast exceeds the requirement for the VRM class, the impact is considered significant. For significant impacts, the contrast rating score is

used to identify what features and elements can be lowered to meet the assigned VRM contrast rating standards. Since the overall VRM goal is to minimize visual impacts, mitigation measures are proposed for all adverse contrasts that can be reduced.

4.13.4 No Action Alternative

Effect of No Action Alternative with Continuation of Current Inflow Conditions

No significant visual impacts would occur under the No Action Alternative with a continuation of the current inflow conditions because the level of the Salton Sea would be expected to remain relatively constant. The degree of visual contrast would be rated as “none” because any change in Sea elevation would not be visible or perceived. Similarly, expected increases in salinity levels would have no noticeable visual effects.

The No Action Alternative with current inflows may result in an increase in noxious odors if current flows cause an increase in conditions that produce odors, such as algal blooms and fish and avian die-offs.

Effect of No Action Alternative with Reduced Inflows

Significant visual impacts would be expected under the No Action Alternative with reduced inflows. Implementing this alternative would have a moderate to strong visual contrast with the surrounding landscape because the level of the Salton Sea is expected to drop by approximately 15 feet from its current elevation. Under this scenario, approximately 35 square miles of natural water features along the shoreline would be replaced with exposed seabed. Views of the Salton Sea currently visible to residents, pedestrians, drivers, and recreationists would be altered throughout the basin; specific effects would depend on the location and nature of viewer.

The No Action Alternative with reduced inflows may result in an increase in noxious odors if reduced flows cause conditions that produce an increase in odors, such as algal blooms and fish and avian die-offs.

4.13.5 Alternative 1

Effect of Alternative 1 with Continuation of Current Inflow Conditions

Compared to the no action existing conditions (current (average) inflow, the effect of inflows associated with Alternative 1 would be to lower the elevation of the Salton Sea approximately five feet.

Construction Activities

North and South Evaporation ponds (98kaf/year). Constructing the evaporation ponds and haul road would occur over an approximate 48-month period. During this period, construction activities would be noticeably visible in the foreground/middleground view of residents in Salton City and Desert Shores, as well as for motorists traveling north and south along SR 86. Residents and motorists would

observe a high visual contrast to the existing setting caused by activities that include the following:

- Large pieces of equipment used for dredging sludge material, placing fill material, and trucking borrow material and assorted construction vehicles;
- Construction signs and lights and a temporary haul road; and
- Construction materials, site office trailers, portable toilets, fencing, and parking areas.

Fugitive dust from construction areas, including potential emissions from trucks hauling borrow material, could be noticeable immediately adjacent to construction areas and along the temporary haul route. Visual impacts due to construction are unavoidable. However, because of their temporary short-term nature, they are considered less than significant.

Pupfish pond. The pupfish pond would be constructed over an approximate 36-month period. Construction activities would be slightly visible in the foreground and middleground view of motorists traveling north and south along SR 86, specifically along the segment between the Salton Sea Test Base and the southern tip of Salton Sea. Other visual impacts due to construction would be similar to those discussed for the north and south evaporation ponds.

Facility Operations

North and South Evaporation ponds (98kaf/year). The evaporation ponds would generally occur in the middleground to background views of the surrounding Salton Sea Basin. For example, at a distance of approximately five miles, the visual contrast of the ponds from views in the vicinity of the Red Hill Marina on the south shore would be weak. The water level of the ponds would blend in with the surrounding flat topography and distant horizon line across the Sea. The only vertical element that would be moderately visible would be the constructed dikes, 35 feet high. Viewers most likely affected by the features would be Salton City residents near the shoreline and recreational boaters.

Salton City. As seen from the shoreline at Salton City, the prominent mass and stark color and texture created by the engineered dikes would contrast noticeably with the natural form, color, and texture of the open Sea landscape. This visual contrast would reduce the Sea's visual intactness and unity and could block scenic shoreline views of the distant Chocolate Mountains. The contrast rating threshold of significance for this area is 12, and the proposed facilities implemented under Alternative 1 would have a contrast rating of 17 for KVOP #1. Therefore, the project would exceed the threshold of significance and would be considered a significant visual impact.

Pupfish pond. The pupfish pond would generally occur in the foreground and middleground views of the Salton Sea Basin. The only vertical element that would be slightly visible would be the constructed dikes to accommodate this protection pond,

three feet in height and one foot in depth. On the shorebird pond side, the water elevation of the pond would be level with the height of the dike and would blend in with the surrounding flat topography and distant horizon line across the Sea. Because water level on the sea side (concentration ponds) would drop three feet, the top of the constructed dikes (one foot in depth and wall similar to a “z” shape) would be slightly visible from a distance. The dike would be located from the north and southern ends of the southwest evaporation pond extending to the shoreline, creating a protection pond between the shore and evaporation pond. Viewers most likely affected by this element would be motorists traveling along SR 68, specifically the roadway segment defined by the Salton Sea Test Base and the southern tip of Salton Sea.

The contrast rating threshold of significance for this area is 12, and the pupfish pond would have a contrast rating of 7 for KVPO #9. Therefore, the project would not exceed the threshold of significance and would not be considered a visual impact.

Odors

Under Alternative 1, constructing the concentration ponds could generate temporary odors while sludge material is being dredged from the dike foundation areas. More permanent odors could result if the ponds were to generate algal blooms. However, potential impacts associated with this new odor source would be at least partially offset if a reduction in salinity improved the condition of the Sea, resulting in fewer algal blooms and fish and avian die-offs in this larger water body.

Operation of a fish processing plant at the Torres Martinez Indian Reservation or the Salton Sea Test Base could result in significant odor problems. Fish byproduct manufacturing uses fish waste or fish not suitable for human consumption to produce fish meal, fish oil, or other product. During the boiling, drying, and evaporation of press water used in the manufacturing process, vapors are generated. Proteins, crude fats, and volatile organic acids dissolved in the vapors can spread highly unpleasant odors to the surrounding areas; the degree to which odors spread are determined by the volume of the vapor and local meteorological conditions. These odors could have a significant impact on surrounding sensitive residential and recreational areas if not controlled. Control measures for fish byproduct processing include the use of afterburners, chlorinator-scrubbers, or condensers. Use of such control technology can provide up to nearly 100 percent odor control (US EPA 1995).

Effect of Alternative 1 with Reduced Inflow Conditions (1.06 MAFY)

Compared to current inflow conditions (1.363 MAFY), the effect of reduced inflows (1.06 MAFY) associated with Alternative 1 would be to lower the elevation of the Salton Sea approximately eight feet. However, compared to the No Action Alternative with reduced inflow conditions, the effect of Alternative 1 with reduced inflows would be to reduce the elevation of the Salton Sea by approximately three feet. Views of the proposed evaporation ponds from Salton City would be similar to those described above for conditions that assume continuation of current inflow conditions. However, compared to existing conditions, Alternative 1 with reduced inflows may result in both additional visual contrast along the shoreline and an increase in noxious odors if

reduced flows in the Sea cause conditions that produce an increase in odors, such as algal blooms and fish and avian die-offs. Alternative 1 with reduced inflows also could produce odors at the concentration ponds. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed above.

Construction Activities

Displacement Dike. Constructing the displacement dike would occur over an approximate 48-month period. During this period, construction activities would be noticeably visible in the foreground/middleground view of recreationalists in Red Hill Marina and of recreational boaters and in the middleground/background for motorists traveling north and south along SR 111. Recreationalists and motorists would observe a high visual contrast to the existing setting caused by construction activities similar to those discussed for the north and south evaporation ponds. Visual impacts due to construction are unavoidable. However, because of their temporary short-term nature, they are considered less than significant.

North wetland habitat. The north shorebird and pupfish protection pond would be constructed over an approximate 36-month period. Construction activities would be noticeably visible in the foreground and middleground view of residents in the Torres Martinex Reservation. Construction activities would be moderately visible in the middleground/background view of residents in Desert Shores and Desert Beach. Other visual impacts due to construction would be similar to those discussed for the north and south evaporation ponds.

Facility Operations

Displacement Dike. The displacement dike would generally occur in the foreground to middle ground views of the surrounding Salton Sea Basin. The visual contrast of the dike from views of Red Hill Marina would be strong. Since it is expected that the area the dikes will displace will be dry for most of the year, the dike (35 feet in height) would be completely exposed and considered a significant vertical element visible from the Red Hill Marina shorelines. Dependent on the current water elevation, the top of the dike, 30 feet in depth, would be visible to recreational boaters.

Red Hill Marina: As seen from the shoreline at Red Hill Marina, the prominent mass and stark color and texture created by the engineered dikes would contrast noticeably with the natural form, color, and texture of the open Sea landscape. This visual contrast would reduce the Sea's visual intactness and unity of the landscape. The wall of the dike, 35' in height, would be entirely exposed, visible from Red Hill Marina. The dike would be approximately 16 miles in length and would extend from two designated points along the shoreline into the sea (see Figure 2.4-4). The contrast rating threshold of significance for this area is 12 and the proposed facilities implemented under the Alternative 1 would have a contrast rating of 29 for KVOP #5. Therefore the project would exceed the threshold of significance and would be considered a significant visual impact.

North wetland habitat. The north shorebird and pupfish protection pond would generally occur in the foreground and middleground views of the Salton Sea Basin Basin. Visual impacts due to facility operations would be similar to those discussed for the pupfish pond. Viewers affected by this element would be the residents of the Torres Martinex Reservation.

The contrast rating threshold of significance for this area is 12 and the proposed facilities implemented under the Alternative 1 would have a contrast rating of 7 for KVOP #7. Therefore the project would exceed the threshold of significance and would be considered a significant visual impact.

4.13.6 Alternative 2

Effect of Alternative 2 with Continuation of Current Inflow Conditions

Construction Activities

EES located North of Bombay Beach. Constructing the EES facility would occur over an approximate 36-month period. During this period, construction activities would be noticeably visible in the foreground/middleground view of residents in the communities of Lark Spa and Fountain of Youth, as well as to motorists traveling north and south along SR 111, a state-designated scenic highway. Other viewers that could be temporarily affected during construction include recreationists along the eastern seashore and at the nearby Dos Palmas Reserve, north of the proposed facility.

Residents, motorists, and recreationists would observe a high visual contrast to the existing setting caused by activities that include the following:

- Construction materials, site office trailers, portable toilets, fencing, and parking areas;
- Construction signs and lights; and
- Large pieces of equipment used to create the underground tunnel accommodating the intake structure for the EES system

Constructing the EES facility near Bombay Beach would be noticeably visible in the foreground/middleground view of residents in the communities of Lark Spa and Fountain of Youth, as well as to motorists traveling north and south along SR 111, a state-designated scenic highway. Other viewers that will be temporarily affected during construction include recreationists along the eastern seashore and at the nearby Dos Palmas Reserve, north of the proposed facility. Residents, motorists, and recreationists would observe a high visual contrast to the existing setting caused by construction activities that include use and storage of large pieces of equipment and building materials.

As described above for Alternative 1, fugitive dust from construction areas, including potential emissions from trucks, could be noticeable immediately adjacent to

construction areas. Visual impacts due to construction are unavoidable. However, because of their short-term nature, they are considered less than significant.

Facility Operations

EES located North of Bombay Beach. Developing the EES system near Bombay Beach would have a moderate to strong visual contrast within the surrounding area. The most dominant visual elements would be the series of approximately 85- to 150-foot towers. These towers are expected to be lighted at night to warn aircraft of their presence. The site would attract viewer attention and may begin to dominate the landscape when viewed from close points along SR 111, a state-designated scenic highway that supports local, commercial, and tourist travel. Other nearby sensitive visual receptors that would be moderately affected by this alternative are residents in the nearby communities of Lark Spa and Fountain of Youth, approximately 3.5 miles to the southeast, as well as visitors to the Dos Palmas Reserve to the north.

Due to intervening topography that skirts segments of the Salton Sea shoreline, the EES system would not be visible from portions of SR 111 or from Bombay Beach. In addition, these facilities would be in the “seldom seen” zone, beyond 15 miles from more distant observation points, such as the Torres Martinez Indian Reservation and the Red Hill Marina, and western shore communities, such as Salton City and Desert Shores.

Dos Palmas Reserve: The proposed EES facilities would be seen as an element in the foreground/middleground from the Dos Palmas Reserve, approximately 3.5 miles north of the project site. From this vantage, there is no mountain backdrop. Although this view is cluttered with transmission line poles and wires in the distant foreground, the proposed engineered features of the new EES facilities would create a silhouette that would contrast moderately with the barren desert landscape and open expansive background.

The contrast rating threshold of significance for this area is 12 and the contrast rating for the Dos Palmas Reserve (KVOP #3) would be 20. Therefore, the visual impacts from this location would be considered significant.

Communities of Lark Spa and Fountain of Youth: The proposed EES facilities would be seen as an element in the foreground/middleground from Lark Spa and Fountain of Youth, approximately 3.5 miles southeast of the project site. Though the proposed facilities would be visible, they would occupy only a portion of the panoramic view over the basin from this perspective and would not completely block views of the scenic mountain backdrop west of the Sea. Nevertheless, the introduction of large engineered features into this natural desert landscape would create a moderate contrast compared to the existing visual environment.

The contrast rating threshold of significance for this area is 12 and the contrast rating for Lark Spa and Fountain of Youth (KVOP #4) would be 19. Therefore, the visual impacts from this location would be considered significant.

SR 111: As seen from nearby foreground viewpoints along SR 111, the strong lines and patterns of the engineered features, such as the tower modules and precipitation ponds, would contrast noticeably with the natural horizontal plane of the flat desert landscape and the vivid mountainous backdrop. Similarly, the gray concrete ponds and towers would contrast moderately with the blue-gray backdrop of the Orocopia and Chocolate mountains. Although these features would be visible only from portions of the eastern seashore and surrounding environs, they would render this facility a local visual landmark. The impact would be most vivid when in the foreground/middleground viewing distance.

The degree to which the water sprayed from the towers would be viewed as a distinct visible feature and would vary with atmospheric conditions (e.g., the system would be shut down when winds exceeded 14 miles per hour). The water would be sprayed from the towers before precipitating into the ponds below and would be visually similar to fog and therefore would produce only a weak to moderate visual contrast against the mountain backdrop.

The contrast rating threshold of significance for this area is 12, and the contrast rating for the KVOP at this location (KVOP #6) would be 28. Therefore, the visual impacts from SR 111 would be considered significant.

Odors

Under Alternative 2, beneficial odor impacts would occur if a reduction in salinity improved the condition of the Sea, resulting in fewer algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Effect of Alternative 2 with Reduced Inflow Conditions

Compared to existing conditions, the effect of reduced inflows associated with Alternative 2 would be to lower the elevation of the Salton Sea approximately 18 feet. However, compared to the No Action Alternative with reduced inflow conditions, the effect of Alternative 2 with reduced inflows would be to lower the elevation of the Salton Sea by only approximately three feet.

Under both scenarios, views of the proposed EES facility near Bombay Beach from SR 111 and other nearby sensitive viewing locations would not be substantially different from those described above for conditions that assume continuation of current inflow conditions because the Sea is not visible in these views. However, additional visual contrast would result for boaters under these scenarios because natural water features along the shoreline would be replaced with exposed seabed. Compared to existing conditions, there would be an increase of approximately 91 square miles of exposed seabed, as opposed to only 21 square miles of additional seabed compared to the No Action Alternative with reduced inflows. Views for motorists along State Route 111 looking west across the Sea could similarly be negatively affected. Furthermore, Alternative 2 with reduced inflows may result in an increase in noxious odors if reduced flows cause conditions that produce an increase in odors, such as algal blooms and fish

and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed above.

Displacement Dike. Impacts related to both construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

North wetland habitat. Impacts related to construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

Construction Activities

Import Flood Flows. Improvements would be made to the Alamo Channel and minor maintenance of evacuation areas along the Coachella Branch to Salton Sea. Improvement activities would not be noticeably visible in the foreground, middleground, or background around these areas. Construction activities would be similar to those discussed in Alternative 2.

Facility Operations

The importing of flood flows would not have a visual impact to the landscape.

4.13.7 Alternative 3

Effect of Alternative 3 with Continuation of Current Inflow Conditions

Construction Activities

EES located at the Salton Sea Test Base. Constructing the EES facility at the former Salton Sea Test Base would occur over an approximate 36-month period. During this period, construction activities would be noticeably visible in the foreground/middleground views of motorists traveling both north and south along SR 86, as well as in views from nearby recreationists along the western shoreline and in the Sea. Motorists and recreationists would observe a high visual contrast to the existing setting, caused by construction activities that include use and storage of large pieces of equipment and building materials.

As described above for Alternative 1, fugitive dust from construction areas, including potential emissions from trucks, could be noticeable immediately adjacent to construction areas. Visual impacts due to construction are unavoidable. However, because of their temporary, short-term nature, they are considered less than significant.

Facility Operations

Developing the EES system on the former Salton Sea Test Base site would have a strong visual contrast with the surrounding landscape. The approximate 85- to 150-foot towers would be located directly to the east and west of SR 86. Proposed facilities also would be visible to pedestrians using the shoreline at Salton City and to recreational boaters. EES facilities would be in the “seldom seen” zone, beyond 15 miles from more distant observation points, such as the Torres Martinez Indian Reservation, the Red Hill Marina, and eastern shore communities such as Bombay Beach and Desert Beach.

SR 86: As seen from nearby foreground viewpoints along SR 86, the strong lines and patterns of the engineered features, such as towers and ponds, would contrast noticeably with the natural horizontal plane of the flat desert landscape and the mountain backdrops to the east and west. Similarly, the gray concrete ponds and towers would moderately contrast with the blue-gray backdrop of the distant mountains. Although these features would be distinctly visible only from portions of SR 86, they would render this facility a local visual landmark. The impact would be most vivid when in the foreground/middleground viewing distance.

As described under Alternative 2, the degree to which the water sprayed from the towers would be viewed as a distinct visible feature would vary with atmospheric conditions (e.g., the system would be shut down when winds exceeded 14 miles per hour). The water would be sprayed from the towers before precipitating into the ponds below and would produce only a weak to moderate visual contrast against the distant mountain backdrops.

The contrast rating threshold of significance for this area is 12, and the contrast rating for the KVOP at this location (KVOP #2) would be 27. Therefore, the visual impacts from SR 86 would be considered significant.

Odors

Under Alternative 3, beneficial odor impacts would occur if a reduction in salinity improved the condition of the Sea, resulting in fewer algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Effect of Alternative 3 with Reduced Inflow Conditions

Compared to existing conditions, the effect of reduced inflows associated with Alternative 3 would be to lower the elevation of the Salton Sea approximately 18 feet. However, compared to the No Action Alternative with reduced inflow conditions, the effect of Alternative 3 with reduced inflows would be to lower the elevation of the Salton Sea by only approximately three feet.

Views of the proposed EES facility at the former Salton Sea Test Base from SR 86 would not be substantially different from those described above for conditions that assume continuation of current inflow conditions because the Sea is approximately six miles to the east and not highly visible. However, additional visual contrast would result for boaters under these scenarios because natural water features along the shoreline would be replaced with exposed seabed. Compared to existing conditions, there would be an increase of approximately 91 square miles of exposed seabed compared to only 21 square miles of additional seabed under a No Action Alternative with reduced inflows. Furthermore, Alternative 3 with reduced inflows may result in an increase in noxious odors if reduced flows cause an increase in conditions that produce odors, such as algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Displacement Dike. Impacts related to construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

North wetland habitat. Impacts related to construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

Import Flood Flows. Impacts related to construction and facility operations would be similar to those discussed under Alternative 2 reduced inflow conditions.

4.13.8 Alternative 4

Effect of Alternative 4 with Continuation of Current Inflow Conditions

Construction Activities

South Evaporation Pond and EES system located at Salton Sea Test Base. Visual impacts would be associated with constructing the evaporation ponds combined with the effects of constructing the EES at the former Salton Sea Test Base. These effects are discussed under alternatives 1 and 3, respectively. Visual impacts due to construction would be unavoidable; however, because of their short-term nature, they are considered less than significant.

Pupfish pond. Visual impacts are similar to those discussed in Alternative 1 reduced flows.

Facility Operations

South Evaporation Pond and EES system located at Salton Sea Test Base. Visual impacts associated with operating the evaporation ponds combined with the EES system on the former Salton Sea Test Base would be significant because both facilities would create a strong visual contrast with the surrounding landscape. The 85- to 150-foot towers would be directly east of SR 86, and pedestrians using the shoreline at Salton City or recreational boaters also would see these structures. These effects are discussed under alternatives 1 and 3, respectively.

Pupfish pond. Visual impacts are similar to those discussed in Alternative 1 reduced flows.

Odors

Under Alternative 4 constructing the concentration ponds could generate temporary odors while sludge material is dredged from the dike foundation areas. Odors that are more permanent could result if the ponds generate algal blooms. However, these odors could be offset if a reduction in salinity improved the condition of the Sea, resulting in fewer algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Effect of Alternative 4 with Reduced Inflow Conditions

Compared to existing condition, the effect of reduced inflows associated with Alternative 3 would be to lower the elevation of the Salton Sea approximately 13 feet. However, compared to the No Action Alternative with reduced inflow conditions, the effect of Alternative 3 with reduced inflows would be to raise the elevation of the Salton Sea by approximately two feet.

Views of the proposed evaporation ponds and EES facilities from SR 86 would be similar to those described above for conditions that assume continuation of current inflow conditions. However, compared to existing conditions, additional visual contrast would result because approximately 48 square miles of natural water features along the shoreline would be replaced with exposed seabed. Alternative 4 with reduced inflows also may result in an increase in noxious odors if reduced flows cause an increase in conditions that produce odors, such as algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Displacement Dike. Impacts related to construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

North wetland habitat. Impacts related to construction and facility operations would be similar to those discussed under Alternative 1 reduced inflow conditions.

Import Flood Flows. Impacts related to construction and facility operations would be similar to those discussed under Alternative 2 reduced inflow conditions.

4.13.9 Alternative 5

Effect of Alternative 5 with Continuation of Current Inflow Conditions

Construction Activities

EES Within Evaporation Pond. Visual impacts would be associated with constructing the evaporation ponds combined with the effects of constructing the EES north of the former Salton Sea Test Base opposite Salton City. These effects are discussed under alternatives 1 and 3, respectively. Visual impacts due to construction would be unavoidable; however, because of their short-term nature, they are considered less than significant.

North wetland habitat. Impacts are similar to those discussed under Alternative 1 reduced flow conditions.

Facility Operations

EES Within Evaporation Pond. Visual impacts associated with operating the evaporation ponds combined with the EES system north of the former Salton Sea Test Base would be significant because both facilities would create a strong visual contrast with the surrounding landscape. The 85- to 150-foot towers would be directly east of SR 86, and pedestrians using the shoreline at Salton City or recreational boaters also

would see these structures. These effects are discussed under alternatives 1 and 3, respectively.

North wetland habitat. Impacts are similar to those discussed under Alternative 1 reduced flow conditions.

Odors

Under Alternative 5 constructing the concentration ponds could generate temporary odors while sludge material is dredged from the dike foundation areas. Odors that are more permanent could result if the ponds generate algal blooms. However, these odors could be offset if a reduction in salinity improved the condition of the Sea, resulting in fewer algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Effect of Alternative 5 with Reduced Inflow Conditions

Compared to existing condition, the effect of reduced inflows associated with Alternative 3 would be to lower the elevation of the Salton Sea approximately 13 feet. However, compared to the No Action Alternative with reduced inflow conditions, the effect of Alternative 3 with reduced inflows would be to raise the elevation of the Salton Sea by approximately two feet.

Views of the proposed evaporation ponds and EES facilities from SR 86 would be similar to those described above for conditions that assume continuation of current inflow conditions. However, compared to existing conditions, additional visual contrast would result because approximately 48 square miles of natural water features along the shoreline would be replaced with exposed seabed. Alternative 4 with reduced inflows also may result in an increase in noxious odors if reduced flows cause an increase in conditions that produce odors, such as algal blooms and fish and avian die-offs. Impacts and potential mitigation measures for a fish processing plant would be the same as discussed under Alternative 1.

Displacement Dike. Impacts associated with both construction and facility operation are similar to those discussed under Alternative 1 reduced inflow.

Import Flood Flows. Impacts associated with both construction and facility operation are similar to those discussed under Alternative 1 reduced inflow.

4.13.10 Cumulative Effects

As discussed in Chapter 2, a number of regional projects could have long-term effects on the average annual inflows to the Sea. The most likely result of these cumulative projects is that future inflows to the Sea could be lower than current conditions. The effects of such an inflow reduction on visual resources have been discussed for each alternative.

Other projects could contribute to significant cumulative visual effects from a regional perspective when combined with restoration of the Salton Sea. For example, there are several proposals to construct major new facilities, such as a wastewater treatment plant in Mexicali, a regional landfill in eastern Imperial County, and a new industrial and commercial complex near the Calexico and the US/Mexico border. Other planned developments involve expanding existing facilities, such as the Mesquite Gold Mine in eastern Imperial County. However, these projects would not be visible from the viewsheds associated with the Salton Sea restoration project and therefore would not contribute to any localized cumulative impacts.

Indirect cumulative effects could occur if reduced inflows caused conditions that produce noxious odors to increase over baseline conditions.

4.13.11 Mitigation Measures

Mitigation Measures for Construction Activities (Alternatives 1 through 4)

Although visual impacts associated with construction activities are considered less than significant, the following mitigation measures are recommended to further reduce construction-related visual effects:

- Follow standard construction methods to minimize the visual impact caused by construction disruption. These include limiting construction access to identified travel routes, designating layout space and other construction zones to predefined areas, and implementing dust control measures.
- When construction is completed, evaluate any disturbance at temporary laydown and equipment storage areas and restore these areas to their pre-construction condition.
- Remove construction equipment from the project area when it is no longer needed.

Mitigation Measures for Operation of Evaporation Ponds (Alternatives 1 and 4)

The following mitigation measures are recommended to reduce the visual contrast between the color, form, and texture of the proposed evaporation ponds and that of the existing landscape character:

- To maintain the visual integrity and unity of the Salton Sea shoreline as seen from SR 86, paint the proposed dikes a color that blends with the immediate natural desert landscape. The selected color should be a shade darker than the pale beige tones of the adjacent landscape to compensate for effects of shade and shadow.
- To reduce color contrast, use only nonreflective materials throughout the evaporation pond facility.

- To minimize contrast with the horizontal character of the Salton Sea shoreline, design the facility to emphasize horizontal lines.

Although the recommended mitigation measures would reduce the visual contrasts of the evaporation ponds and related facilities, proposed project impacts from Salton City would still be considered significant.

Mitigation Measures for Operation of EES Facility (Alternatives 2, 3, and 4)

To reduce the visual contrast between the color, form, and texture of the proposed EES facilities, including the tower modules and precipitation ponds, and that of the existing landscape character, implement the measures identified for operation of the evaporation ponds, along with the following measures:

- To reduce color contrast, use nonreflective fencing throughout the project site, and, where feasible, install native landscaping to screen facilities and create a more natural-looking environment; and
- Construct a pull out off a nearby highway (e.g., SR 111 or SR 86) that includes a small sign explaining the purpose and function of the facility.

Although the recommended mitigation measures would reduce the visual contrasts of the EES facilities, proposed project impacts would still be considered significant.

4.13.12 Significant Unavoidable Impacts

Implementation of either Alternatives 1, 2, 3, or 4 would result in significant and unavoidable visual impacts. The massing, bulk, and color of the proposed evaporation ponds and EES facilities would result in moderate to strong visual contrasts with the existing desert landscape in the basin, as seen from key viewing observation points. Although mitigation measures have been identified that can reduce the effects of these impacts, proposed project impacts would still be considered significant.